At A Glance

The Trending Analysis and Plotting System (TAPS) provides tools to spacecraft operators and decision makers so they may generate trending products quickly and make decisions fast. The goal of TAPS is to make life easier for Flight Operation Team (FOT) in the spacecraft control centers. Its well-designed GUI makes it user-friendly software.

Benefits

- Easy to reconfigure for different missions.
- Ability to import/export spreadsheet data files.
- Generates products in seconds.
- Creates Relational Telemetry Expressions (RTE) mnemonics using TAPS powerful built-in calculator.
- Accessible through a secure web interface.
- Reduces FOT training time.

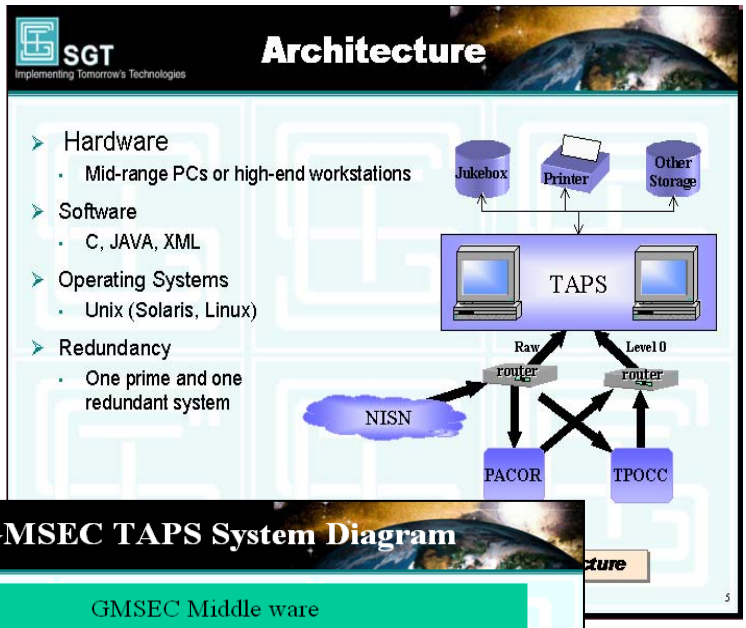
Advanced Features

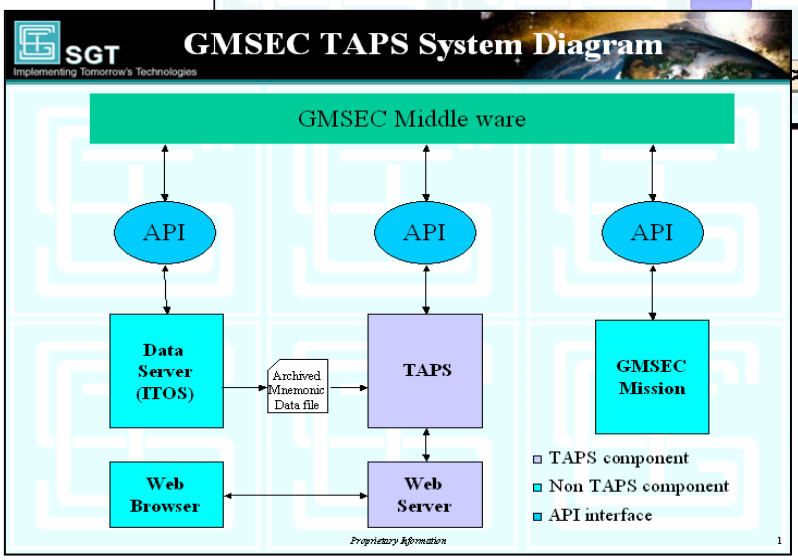
- Automated Data Capture
- Automated Product Generation
- RTE creation
- View Event Logs
- Multiple PDB ingestion
- Ingest Trending Preset
- Ingest CSV Data File(s)
- Ingest CDR Data File

Trending, Analysis & Plotting System - TAPS

Summary

The Trending Analysis Plotting System (TAPS) is an engineering analysis tool developed originally to improve the ability of a flight operations team (FOT) to reduce or avoid risk to spacecraft. TAPS allows FOT to rapidly generate customized trending products to assist in monitoring the overall health and safety of the spacecraft. TAPS currently is operational on the Advance Composition Explorer (ACE), the X-Ray Timing Experiment (XTE) and the Earth Radiation Budget Satellite (ERBS) missions. It is a modular trending system which can easily be configured for other spacecraft.
TAPS has been chosen as the foundation for the GMSEC trending system. GMSEC TAPS communicates with other components in the GMSEC network to generate TAPS products. It accepts trending product requests from any component in the GMSEC network or from a web browser. Following the GMSEC specification, it does not decommutate and calibrate the raw data, nor does it use the spacecraft's Project Data Base (PDB) to get information for a mnemonic. It instead uses data provided by the GMSEC data server through the GMSEC network. GMSEC TAPS has a secure web interface which makes it easy to use wherever it is needed.





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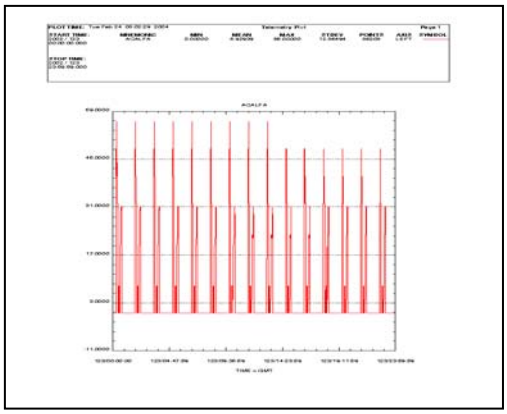
TAPS Products

TAPS shows the result of the trend in the form of products that are easy to read and analyze for the flight operations team. TAPS provides an easy-to-follow wizard to configure and create a product. The user can save the created product configuration in a preset to be generated again quickly when needed. TAPS generates four products: plots, tables, analyses, and reports.
Each product in TAPS has special features that make it easy to configure and use. These features help the FOT in their routine analysis as well as anomaly analysis.

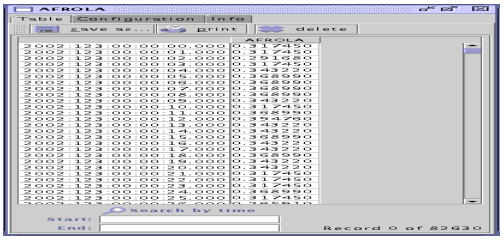
Plot

- Display up to 6 mnemonics in a plot.
- Zoom in/Zoom out
- Show yellow/red limits of a mnemonic in a plot
- Show different types of plots
  - mnemonic vs. time
  - mnemonic vs. mnemonic
  - bar charts
- Define/change
  - axes scale and its type
  - major/minor tics on axes
  - axes label
  - plot color
  - plot type (line/dotted)
  - plot title
- Save/print plot



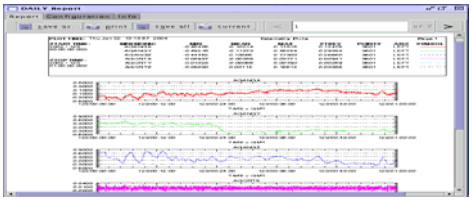
Table

- Show raw/calibrated values
- Show discrete values as text
- Delete a value in the table
- Delete a row in a table
- Filter the table by value/time range
- Save/print table in comma separated value file



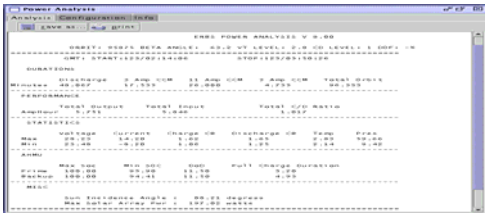
Report

- Add/delete pages from a report
- Show a product in the report as portrait/landscape
- Save/print all pages or the display page of a report
- Show up to 6 plots per page.
- Draw up to 9 mnemonics per page



Analysis

- Save/print page(s) of an analysis as text
- Plug-in the existing spacecraft analysis programs



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